

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

I. Status of the Application

Claims 9-11 and 16 have been cancelled. Claims 12-15 and 17-22 remain in this application. The specification has been amended as requested by the Examiner to account of the issuance of the parent patent application.

II. Claim Rejections

Claims 12-22 have been rejected by the Examiner under 35 USC §112, second paragraph, as being indefinite. Specifically, the Examiner states that the limitation “main gear member” in claim 12, the limitation “surface portion” in claims 12 and 17, and the limitation “lightweight material” in claim 16, lack proper antecedent basis. Additionally, the Examiner states that the phrase “such as” in claims 16 and 22 renders the claims indefinite.

Claims 9-11 and 16 have been rejected by the Examiner under 35 USC §102(b) as being anticipated by Japanese patent 2000186718A (the “Japanese Patent”). Claim 9 has further been rejected by the Examiner under 35 USC §102(b) as being anticipated by Tortora et al. (U.S. Patent No. 6,026,711).

Claims 12, 13, 17, 21 and 22 have been rejected by the Examiner under 35 USC §103(a) as being unpatentable over the Japanese Patent in view of Kobayashi et al. (U.S. Patent No. 5,934,157). While claim 18 is not discussed, it appears that the Examiner has also rejected claim 18 on this basis.

The Examiner alleges that the Japanese Patent discloses a wave gear drive having a rigid internal gear (120), a flexible external gear (130) located inside the internal gear, a wave generator (140) located inside the internal gear, and a lightweight bearing (150) that couples the internal and external gears to provide relative rotation between them. The Examiner further states that the Japanese Patent discloses the rigid gear having a main gear member (121) and a circular teeth formation member (122) attached to an inner periphery of the main gear member having internal teeth (123) wherein the formation member is formed of an iron-based material and the main gear member is formed of a lightweight material lighter than the iron based material [0065]. The Examiner further states that the Japanese Patent discloses the wave generator having a rigid cam plate (141) and a ball bearing (142) disposed on an outer periphery of the cam plate wherein the cam plate is formed of a lightweight material lighter than an iron-based material [0061] and the lightweight material is a light metal of aluminum alloy, titanium alloy, plastic or ceramic. The Examiner further states that the Japanese Patent discloses the main gear member having fixing holes formed thereon for attachment to another member. The Examiner admits that the Japanese Patent does not disclose plate coating the seats for the fixing holes.

The Examiner states that Kobayashi et al. disclose a wave gear drive having a rigid internal gear (2) with fixing holes in a main gear member wherein the teeth of the member are plate coated with nickel or chromium by electrolytic plating. While the Examiner acknowledges that Kobayashi et al. disclose only plate coating the teeth of the gear, not the seats of the fixing holes, the Examiner argues that it would have been obvious to a person of ordinary skill in the art to plate coat the seats of the fixing hole in the Japanese Patent in order to simplify the manufacturing process of the rigid internal gear disclosed therein.

III. Allowable Subject Matter

The Examiner has objected to claims 14, 15, 19 and 20 as being dependent upon a rejected base claim but notes that such claims would be allowable if re-written in independent form. Applicants would like to thank the Examiner for this allowable subject matter.

IV. Response to Rejections Under 35 USC §112

Claim 16 has been cancelled. Claims 12 and 17 have been amended to affirmatively recite the “surface portion” and “main gear member” claim limitations. Claim 22 has been amended to delete reference to the phrase “such as.” For these reasons, the Examiner’s rejection of claims 12-22 under 35 USC §112 has been traversed.

V. Response to Rejections Under 35 USC §102(b)

Claims 9-11 and 16 have been cancelled. Therefore, the Examiner’s rejection of these claims under 35 USC §102 has been rendered moot.

VI. Response to Rejection Under 35 USC §103(a)

The Examiner admits that the Japanese Patent does not disclose plate coating the seats for the fixing holes of the main gear member. In fact, the Examiner does not allege that the Japanese Patent discloses plate coating any part of the main gear member. The Examiner also admits that Kobayashi et al. do not disclose plate coating the seats for the fixing holes of the main gear member, and instead disclose only plate coating the gear teeth.

Independent claim 12 requires a main gear member having a surface portion for seating fasteners used in fixing holes, wherein the surface portion includes a hard plated coating. Claims 12-15 depend from claim 12. Independent claim 17 similarly requires a main gear member

the plate coating of Kobayashi et al. within the gear unit disclosed in the Japanese Patent. At a minimum, there was certainly no reason to plate coat fixing hole seats in the Japanese Patent, as that patent was in no way concerned with increasing the strength and/or resistance of these seats.

Equally important, rather than reducing cost, the application of plate coating in the Japanese Patent would actually have increased manufacturing costs and complicated the manufacturing process by adding one or more additional steps. In light of that added cost and efforts, and in light of the fact that there was no acknowledgement in Kobayashi et al. of the benefit of extending the plate coating to any other regions of the gear, it certainly would not have been obvious to extend the plate coating to the surface portions of the gear comprising fixing bolt seats.

For at least these reasons, it is respectfully submitted that the rejection of claims 12 and 17 has been traversed and these claims are submitted to be patentable over the combination of the Japanese Patent and Kobayashi et al. Claims 12-15 and 18-22 depend from claims 12 and 17 respectively. For at least the reasons stated above, these claims are also submitted to be patentable over the combination of the Japanese Patent and Kobayashi et al.

CONCLUSION

Therefore, in view of the above amendments and remarks, it is respectfully requested that a Notice of Allowance as to all pending claims be issued in this case.

If there are any other issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

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Respectfully submitted,



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